

Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 3-6. These sheets, which include Figs. 1-6, replace the original sheets including Figs. 1-6.

Attachment: Replacement Sheets

REMARKS

This amendment is being filed in response to the Office Action having a mailing date of December 27, 2005. Claims 1-8 are amended as shown. New claims 9-13 are added. No new matter has been added. With this amendment, claims 1-13 are pending in the application.

I. Preliminary Matters

In the Office Action, the Examiner requested the applicant to add a "Prior Art" label to Figures 2-6. Figures 3-6 have been amended to add the label requested by the Examiner, and replacement sheets of drawings are presented herewith for approval. The applicant respectfully notes that Figure 2 is not prior art, and therefore has not been amended to include a prior art label.

The title has been amended based on the suggestion provided by the Examiner. The Examiner is thanked for his helpful suggestion.

The Abstract has been amended as shown. In particular, the Abstract is amended so as to be in a single paragraph, and has also been further amended to more precisely recite the subject matter contained therein. It is believed that the amended Abstract now fulfills the requirements set forth by the Examiner.

II. Discussion of the Applicant's Embodiments in View of the Cited References

In the Office Action, the Examiner rejected claims 1-8 under 35 U.S.C. § 102(b) as being anticipated by Fronk U.S. Patent No. 6,181,578. For the reasons set forth below, the applicant respectfully disagrees with this rejection, and requests that all the pending claims be allowed.

A disclosed embodiment will now be discussed in comparison to the applied references. Of course, the discussion of the disclosed embodiment, and the discussion of the differences between the disclosed embodiment and subject matter described in the applied references, do not define the scope or interpretation of any of the claims. Instead, such discussed

differences are intended to merely help the Examiner appreciate important claim distinctions discussed thereafter.

An embodiment provided by the applicant is directed towards a switching power supply unit 100. The switching power supply unit 100 includes a transformer T10, a switching circuit 110 disposed on a primary side of the transformer T10, a self-driven type synchronous rectifier circuit 120 disposed on a secondary side of the transformer T10 and having two rectifier switches Q12 and Q13, and a self-oscillation stop circuit 140 disposed on the secondary side of the transformer T10. The stop circuit 140 is adapted to turn off the two rectifier switches Q12 and Q13 if a voltage between opposite ends (*e.g.*, between source and drain terminals) of either of the two rectifier switches Q12 and Q13 exceeds a value. *See, e.g.*, Figure 1 and the accompanying description of the present application.

In an embodiment provided by the applicant, the stop circuit 140 includes a Zener diode Z11. When the voltage between the source and drain terminals of either of the two rectifier switches Q12 and Q13 exceeds the Zener voltage of the Zener diode Z11, the Zener diode turns on. If the Zener diode Z11 turns on, the two rectifier switches Q12 and Q13 are turned off, such as by short-circuiting their source and gate terminals. Since both of the two rectifier switches Q12 and Q13 are turned off, the self-oscillation of the synchronous rectifier circuit 120 is stopped. *See, e.g.*, page 14, lines 13-27 of the present application.

Fronk, in contrast to what the present applicant has disclosed, involves a circuit that has a different configuration and function. While Figure 5 of Fronk does disclose a Zener diode 48 in his circuit, the Zener diode 48 merely serves as a protective voltage regulator. For example, Fronk states explicitly that “the voltage of the across the capacitor 46 is maintained at the gate of the free-wheeling rectifier by the Zener diode 48.” *See, e.g.*, column 6, lines 27-29 of Fronk.

Therefore, Fronk’s Zener diode 48 is not used in circuitry to detect a voltage applied between opposite ends (such as a voltage between drain and source terminals) of either of two rectifier switches. Rather, Fronk’s Zener diode 48 is a mere protective voltage regulator, which is not used as a basis for providing a signal to turn off two rectifier switches if the Zener

diode turns on, such as if the voltage between the drain and source terminals of either of the two rectifier switches exceed a Zener voltage of the Zener diode.

III. Discussion of the Claims

Claim 1 is amended to recite, *inter alia*, that the synchronous rectifier circuit includes two rectifier switches. Claim 1 is further amended to recite that the stop circuit is adapted to turn off the two rectifier switches if a voltage between opposite ends of either of the two rectifier switches exceeds a value. As explained above, Fronk does not disclose, teach, or suggest these features. Fronk provides a Zener diode 48 that serves as a mere protective voltage regulator, and does not provide any sort of two rectifier switches that can be turned off if their voltage exceeds a value. Accordingly, claim 1 is allowable over Fronk.

Dependent claims 2-4 recite various features pertaining to a Zener diode and its relationship to the two rectifier switches. Since Fronk does not provide the recited two rectifier switches and the recited features associated with the Zener diode, claims 2-4 are also allowable.

Dependent claims 5-8 recite various features directed towards turning off the two rectifier switches. Since Fronk does not disclose, teach, or suggest two rectifier switches that can be turned off based on certain conditions, dependent claims 5-8 are also allowable.

New claims 9-13 have been added, and which recite features that are distinctive over Fronk. For example, new independent claim 9 recites a synchronous rectifier circuit having two rectifier switches that can be simultaneously turned off if a respective voltage between two terminals of either of the two rectifier switches exceeds a value. Claims 9-13 are allowable.

IV. Conclusion

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

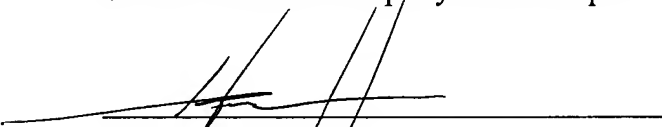
If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 622-4900.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



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DMD:wt

Enclosures:

Postcard
6 Sheets of Replacement Drawings (Figures. 1-6)

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